(11) (6)

# BRUHATH BANGALORE MAHANAGAR PALIKE
# RAJARAJESHWARI NAGAR ZONE

## DETAILED ESTIMATE

**Name of the work:** Special Developmental works at ward no-16.

Est Cost:Rs 100.00 Lakhs

**O/o Executive Engineer(Ele)**
**BBMP, Rajarajeshwari Nagar Zone,**
**BEML 3RD Stage, Rajarajeshwari Nagar,**
**Bangalore-98**

# BRUHAT BANGALORE MAHANAGARA PALIKE
## RAJARAJESHWARINAGAR ZONE
### ELECTRICAL DIVISION
### DETAILED ESTIMATE FOR PUBLIC WORKS

**Name of the Work:Special Developmental works at ward no-16**

| Est. No.AEE/ELE/RRNZ/ EST/ / 17-18 | | | | Job Code: 016-17-000006 | | Est Amt Rs.100.00 Lakhs | |
|---|---|---|---|---|---|---|---|
| Sl No | SR ref page | SR ref sl no | Description of Work | unit | Qty | Rate | Amount |
| 1 | xxvii | 387 | Supply of solar lux level street light controller -single phase 3KW | Each | 70 | 7984.00 | 558880.00 |
| 2 | 45 | 6.7.3 | Supplying & fixing of Porcelain fuse channel with cut out on existing wooden/panel using necessary nuts, bolts and washers. -63Amps | Each | 70 | 234.00 | 16380.00 |
| 3 | 46 | 6.12.3 | Supply and fixing of 4pole power contactor with NO/NC contacts on existing wood/panel board using necessary bolts, nuts, washers and wiring etc., complete with AC-3 Rating and as per IS-13947.--60-70Amps | Each | 70 | 4774.00 | 334180.00 |
| 4 | 47 | 6.16.1 | Supplying and fixing miniature circuit breakers on existing MCB distribution boards using necessary fixing materials and 'C' Type curve, indicator ON/OFF, energy cross-3 with Short circuit breaking capacity of 10K and complete wiring as required confirming to IEC 60898. a)5-32Amps SP | Each | 70 | 418.00 | 29260.00 |
| | 47 | 6.16.2 | b) 40-63 Amps SP | Each | 140 | 677.00 | 94780.00 |
| 5 | 49 | 6.39.1 | Supplying and fixing angle iron frame work fabricated out of M.S. angle iron.. and M.S. flat ... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint -40x40x6mm | Per Mtr | 70 | 263.00 | 18410.00 |
| 6 | 50 | 6.42.2 | Supply and Installation / Fixing / Provision of Outdoor type Thermoplastic Modular Panel enclosure with transparent Polycarbonate Lid, shock proof, IP65 (Weather Proof), rust proof, dust proof, water proof, corrosion proof having internally Embedded gasket on both lid and flap suitable to fix Single Phase / Three Phase Energy Meter in suitable base plate and having a provision for Fuse / MCB cutout with suitable transparent hinged flap opening for operating MCB along with complete tamper proof SEALING facility. --300mmx450mmx214mm ) | Each | 70 | 5826.00 | 407820.00 |
| 7 | 55 | 7.4.5 | Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A. 3.5 core 25 sqmm | Mtr | 700 | 165.60 | 115920.00 |
| 8 | 61 | 7.8..7 | Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.On wall /Structure -25 sqmm to 75 sqmm | Mtr | 700 | 34.80 | 24360.00 |
| 9 | 62 | 7.14.2 | Supplying and fixing of heavy duty cable glands suitable for UG cable of 1.1 KV class (metal only) 25mm dia | Each | 140 | 86.00 | 12040.00 |
| 10 | 64 | 7.21.6 | Supplying tinned copper lugs and crimping and wiring to terminal point for wire of the following sizes.<br>a) 16 sqmm | Each | 560 | 11.31 | 6333.60 |
| | 64 | 7.21.7 | b) 25 sqmm Long Barrel | Each | 140 | 20.59 | 2882.60 |
| 11 | 6 | 2.5.3 | Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP -A.<br>A) 2.5 sqmm | Mtr. | 140 | 29.20 | 4088.00 |
| | 6 | 2.5.7 | B)16 sqmm | Mtr. | 280 | 171.00 | 47880.00 |

| No | SR ref page | SR ref sl no | Description of Work | unit | Qty | Rate | Amount |
|---|---|---|---|---|---|---|---|
| 12 | 27 | 4.35.3 | LED Street light.Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminare > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacture. Suitable for B1/B2 Roads as per IS 1944 Part I & Part II.a) LED Streetlight 65watts | Each | 204 | 18720.00 | 3818880.00 |
| 13 | 27 | 4.36 | LED Street light. Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs. 50000 hr. @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4 KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI 75+. housing with supplier word mark / name shall be engraved / Embossing on the die cast housing / body part. . Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacturer. Suitable for A1/A2 Roads as per IS 1944 Part I & Part II. a) 90 Watts | Each | 120 | 31250.00 | 3750000.00 |
| 14 | 108 | 17.2.2 | Supplying and Fixing.....mm dia class A GI pipe bracket up to 2.7 meters long terminated with a reducing collar of 40x25mm to which extra pipe of 175mm length is fixed for fixing MV/SV/MH/FTL street light fitting of all capacities on rail/RCC/wall/tubular pole, using suitable clamps, bolts ,nuts and wiring using suitable capacity wires. -Using 32mm dia G.I.pipe | Each | 324 | 1140.00 | 369360.00 |

| Sl No | SR ref page | SR ref sl no | Description of Work | unit | Qty | Rate | Amount |
|---|---|---|---|---|---|---|---|
| 15 | 108 | 17.5 | Releasing and Fixing halogen/metal halide / SVL / IL / LED floodlight fitting over existing pole / wall ceiling including clamps, bolts, nuts and wiring using suitable capacity wires.(1.9 times the Basic Rate for Fixing) | Each | 200 | 334.40 | 66880.00 |
| 16 | 34 | 5.11 | Supplying and stringing of ACSR Conductor (6/2.59mm Al +1/2.59mm Steel). | Mtr | 500 | 30.00 | 15000.00 |
| 17 | 33 | 5.4.2 | Supply and fixing of .....cross arm including all Hardware's complete as per the standard technical specification of BESCOM<br>2 Pin 45x45x5mm -510mm | Each | 20 | 306.00 | 6120.00 |
| 18 | 33 | 5.8.5 | Supplying and Fixing ..... including all Hardware's etc. complete as per the standard technical specification of BESCOM a) RCC Clamp | Each | 20 | 84.00 | 1680.00 |
| 19 | 34 | 5.9.1 | Supplying and Fixing .....including all Hardware's etc. complete as per the standard technical specification of BESCOM a) 1.1 KV Pin Insulator | Each | 20 | 44.00 | 880.00 |
|  | 34 | 5.9.5 | No. 8 Strain Insulator | Each | 4 | 14.00 | 56.00 |
| 20 | 56 | 7.6.1 | Supplying of 1.1KV grade Aerial Bunched Cable Stranded & Compacted Aluminum Phase Conductor, and Stranded Messenger Conductor with all aluminum Alloy, Phase Conductor is insulated with XLPE Compound, insulated Messenger with specified IS-14255:1995 & confirming to GTP of GROUP-A.<br>2 X 16 + 1 X 25 SQ.MM | Mtr | 600 | 92.00 | 55200.00 |
|  | 56 | 7.6.3 | 3 X 16 + 1 X 25 + 1 X 16 SQ.MM | Mtr | 335 | 117.00 | 39195.00 |
| 21 |  |  | Supplying and fixing of Dead End Clamp/ Anchor clamps assembly 25 to 95 sqmm bear messanger (Excluding Pole clamp and Eye bolt) CDS-37 Bescom SR-16-17 | Each | 19 | 315.00 | 5985.00 |
| 22 |  |  | Supplying and fixing of suspension clamp assemblly 25 to 95 sqmm bear messanger (Excluding Pole clamp and Eye bolt) CDS-37 Bescom SR-16-17) | Each | 38 | 305.00 | 11590.00 |
| 23 |  |  | Supplying and fixing of Pole clamp for LT/HT CABLE . CDS-37 Bescom SR-16-17 | Each | 38 | 85.00 | 3230.00 |
| 24 |  |  | Supplying and fixing of Universal Hook with bolts & nuts . CDS-37 Bescom SR-16-17 | Each | 38 | 292.00 | 11096.00 |
| 25 | 33 | 5.4.2 | Supply and fixing of .....cross arm including all Hardware's complete as per the standard technical specification of BESCOM<br>2 Pin 45x45x5mm -510mm | Each | 24 | 306.00 | 7344.00 |
| 26 | 34 | 5.13.1.1 | Fabricating, supplying and erecting swaged tubular pole of height ...Mtr having three sections, and providing two coats of red oxide paint and finished with two coats of enameled paint of approved quality and colour and M.S. base plate of suitable size welded at the bottom of the pole(as per IS) and 40mm dia GI / flexible PVC pipe of 1 mtr length fitted to the heavy gauge polycarbonate control box including 5way connector of size 167x125x82mm for 7.5M pole/200x160x98mm for remaining length of pole with front opening cover, with locking arrangements and suitable capacity MCB / DP switch, The pole shall be erected in cement concrete work (1:2:4) including excavation and refilling of planting depth of the pole to the ground level and the coping CC shall be up to 0.6M above ground level as per IS 2713 - 7. Erection of heavy duty pole on Footpath / median 9Mt (5Mt Hb,165.1mm dia 4.85mm thick x2M Hm, 139.7mm dia 4.50mm thick x 2M Ht,114.3mm dia 3.65mm thick) as per IS 410 SP 32 | Each | 4 | 15000.00 | 60000.00 |

| No | SR ref page | SR ref sl no | Description of Work | unit | Qty | Rate | Amount |
|---|---|---|---|---|---|---|---|
| 27 | 108 | 17.4.1 | Supplying and fixing telescopic M.S. bracket fabricated by using 0.5m length 4" dia telescopic M. S. pipe, with 2" dia 1.5m long M. S. bracket and are welded with suitable angle, using 6mm thick M. S. sheet, grip bolts & nuts, as required, suitable for 9 to 12 mtrs. M. S. tubular pole, with necessary two coats of painting, with all other accessories. a) Single bracket 1.5 Mtr. Length | Each | 4 | 1292.00 | 5168.00 |
| | | | **Add PMC charges** | | | | **99000.00** |
| | | | **Miscellanoius and roundoff** | | | | **121.8** |
| | | | **Grand Total** | | | | **10000000.0** |
| **Rupees One Crore Only** | | | | | | | |

**Certificate**

1) Certified that,the work spot has been inspected by me & prepared the estimate in most economical way of executing the work.

2.) The Provisions made in the estimate are adequate and are necessary.

3.) The Work comes in the BBMP limit and is legitimate charges on the Corporation Funds.

4.) The rates in the Estimate are based on the KPWD (Elect ) SR 2014-15,

**Junior Engineer(Electrical)**
**RR Nagar Zone**
**BBMP**

**Assistant Executive Engineer (Elect)**
**RR Nagar Zone**
**BBMP**

**Executive Engineer(Elect)**
**RR Nagar Zone**
**BBMP**

Administrative Sanctioned for Rs 1000000-00
Rs one crore only
is accorded
under the head P3173
By EE (Elect) RRN/ Page 8 & 9
Registered as EE (Elect)RRN/No 18-18 Subject to conditions contained in enclosed memo No 18/17-18 Date 24/07/17

AE (Elect) RRN EE, (Elect) RRN

TECHNICAL SANCTION
Rs 100,00,000/- (Rs one crore only)
is accorded
under the head P-3173
special developmental works 16-17
By CE(R.R.N.) 141/17-18
Registered as CE (R.R.N) No 38-39
In conditions contained in enclosed memo
No 141/17-18 Date 10/8/2017

CE(RRN)